



NORFOLK

Inter Departmental Memorandum

TO: The Honorable City Council

THROUGH: Lori Crouch, Public Relations Manager *LC*

FROM: Robert J. Tajan, AICP, CFM, Floodplain Administrator *RJT*
Department of City Planning

COPIES TO: George M. Homewood, AICP, Director, Department of City Planning

SUBJECT: Southside Hazard Mitigation Plan Update

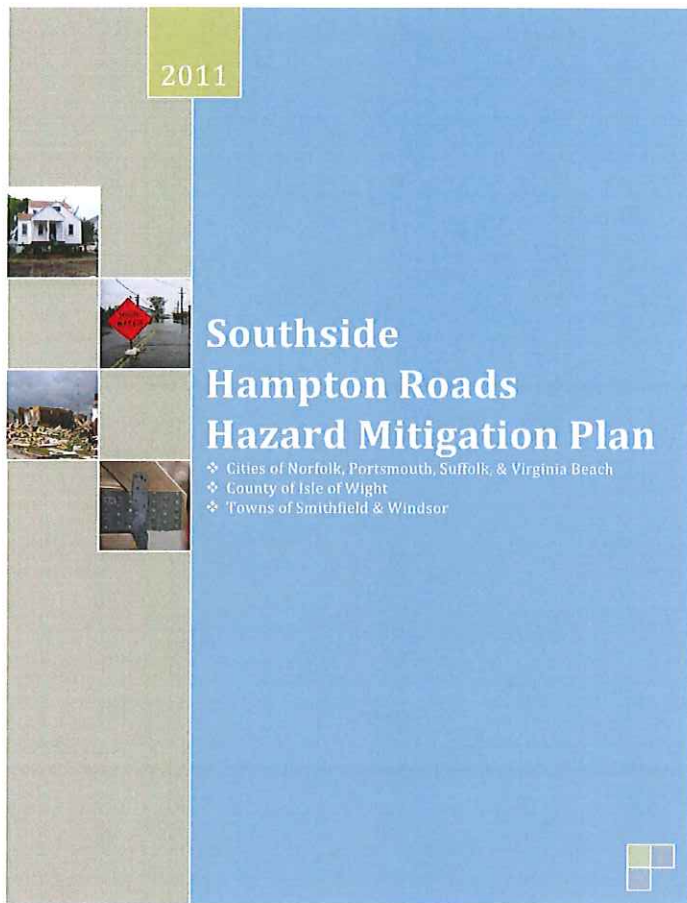
DATE: September 19, 2014

In 2011, the Hampton Roads Planning District Commission updated the Southside Hampton Roads Hazard Mitigation Plan. The City of Norfolk worked with the cities of Virginia Beach, Suffolk, and Portsmouth; Isle of Wight County; and the towns of Smithfield and Windsor to develop this plan. This plan addresses goals and mitigation measures for hazards that Hampton Roads faces and also serves as the Flood Mitigation Plan for the City of Norfolk.

As part of our continued participation in the Community Rating System (CRS) program, a report of this plan and the progress the City of Norfolk has made in implementing the actions is required. It is to be provided to City Council and the National Flood Insurance Program. It will be published on the City of Norfolk flood awareness webpage for citizen review. This report lists the goals and objectives of the plan and details the actions that the City of Norfolk has taken to achieve these goals.

2014

Southside Hampton Roads Hazard Mitigation Plan City of Norfolk Annual Report



Department of Planning and
Community Development
City of Norfolk
9/19/2014

Summary

In 2011, the Hampton Roads Planning District Commission updated the Southside Hampton Roads Hazard Mitigation Plan. The City of Norfolk worked with the cities of Virginia Beach, Suffolk, and Portsmouth; Isle of Wight County; and the towns of Smithfield and Windsor to develop this plan. This plan addresses goals and mitigation measures for hazards that Hampton Roads faces and also serves as the Flood Mitigation Plan for the City of Norfolk.

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Southside Hampton Roads Hazard Mitigation Plan

Purpose:

- Protect life and property by reducing the potential for future damages and economic losses that result from natural hazards;
- Qualify for additional grant funding, in both the pre-disaster and post-disaster environment;
- Speed recovery and redevelopment following future disasters;
- Integrate existing flood mitigation documents;
- Demonstrate a firm local commitment to hazard mitigation principles; and
- Comply with state and federal legislative requirements tied to local hazard mitigation planning.

Goals and Objectives:

Goal 1: Protect critical facilities and infrastructure, including bridges, utilities, and evacuation routes from high risk hazards.

Goal 2: Conduct public education programs to protect lives and property.

Goal 3: Protect property, including neighborhoods, homes and businesses.

- Objective 3.1: Focus efforts on repetitive flood loss protection.
- Objective 3.2: Strengthen building codes and local ordinances.
- Objective 3.3: Maximize state, federal, local and private funds.

Goal 4: Integrate mitigation concepts into local and regional government actions.

- Objective 4.1: Unify local, regional and state planning efforts.
- Objective 4.2: Improve hazard data collection and mapping.
- Objective 4.3: Include separate section of regional mitigation actions in this and future plan updates.

Goal 5: Identify opportunities to implement green, environmentally-friendly and energy-efficient technologies as part of the mitigation strategy.

Mitigation Action 1

Maintain and protect the City's beaches and shorelines

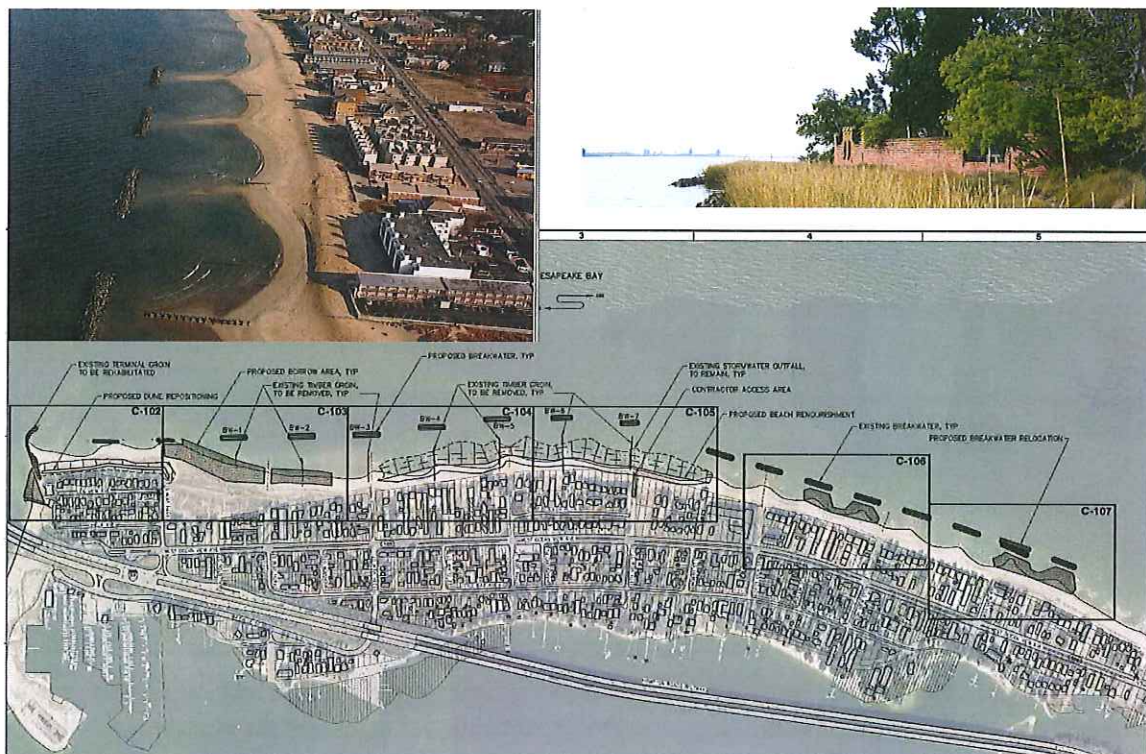
Progress: Ongoing

Report:

Multiple projects have been approved, are under construction, or are under design for shoreline protection throughout the city. Projects range from breakwaters, shoreline improvements, and improvements to stormwater management systems/outfalls. Projects of this nature are continuously being reviewed to ensure that the shores and beaches of the city are properly protected.

Currently plans are under design by the Army Core of Engineers for an engineered beach the along the Chesapeake Bay. The City, through the work of Public Works – Environmental Stormwater, has also received a multi-million dollar grant to improve or install additional areas of wetlands throughout the city.

Construction has been completed for outfall extensions and improvements at 5th Bay, 9th View, 10th View, 12th View and Mason Creek Road. Additional outfall extensions and improvements are under design for 4th View and 12th View. The City has also has approved or participated in the restoration of over 75,000 square feet of wetlands.



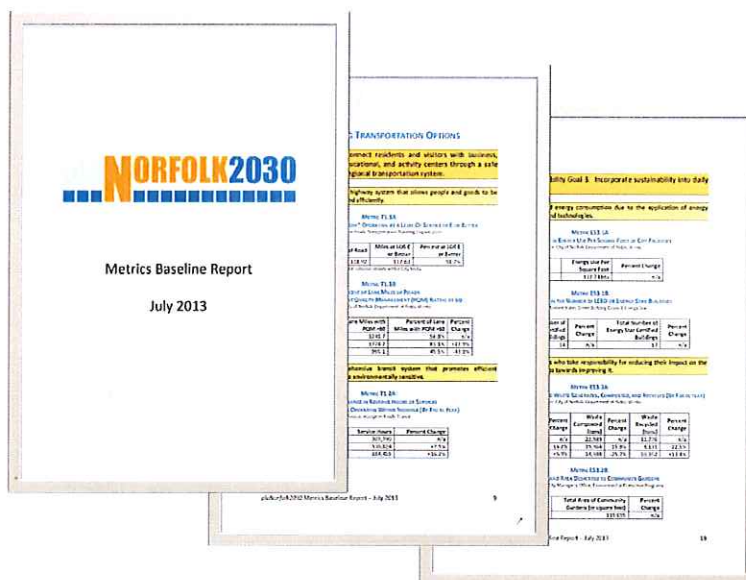
Mitigation Action 2

Update the Comprehensive Plan to incorporate mitigation goals, objectives and actions.

Progress: Completed

Report:

City Council adopted *plaNorfolk2030* on March 26, 2013. The plan was named the Outstanding Comprehensive Plan – Large City from the Virginia Chapter of the American Planning Association (APA). The plan was also featured in the 2014 APA national conference in Atlanta, GA as an example of what content and metrics were important for a Comprehensive Plan. The plan was recognized for its inclusion of sea level rise, flooding and mitigation actions as part of the metrics.



Mitigation Action 3

Expand existing notification system to include the multiple types of media and notices.

Progress: Completed

Report:

The City Manager's Office, Office of Emergency Preparedness and Response, and the Department of Communications and Technology have greatly expanded the ability to provide notice to the public by using multiple media sources. These sources include real time updates to the City's webpage, email distribution lists, Facebook, and Twitter. The City has also updated to a new emergency notification system called Nixle. This system allows for those have signed up for the service to be notified by landline and cell phone calls, email, text message, and social media during a time of emergency by the Office of Emergency Preparedness and Response. 2,582 citizens have registered for Nixle, however with current upgrades the system can notify people by geographical area for live safety messages regardless of if they have registered. Though this system has been upgraded, city staff is continuing to work on other ways to provide emergency notifications.



Mitigation Action 4

Identify and create additional vehicle and equipment staging areas outside of the floodplain, primarily response vehicles.

Progress: Ongoing

Report:

The Department of General Services has established a policy that all City vehicles be located in a safe location during emergency events. Most vehicles located Downtown are directed to be relocated onto the top levels of city owned parking garages to be out of flood waters. Additional storing and staging locations are being reviewed to provide better response during storms. The city also recently completed a new vehicle maintenance facility on Lance Road where additional vehicles may be stored. During major events, the city has worked with its partners to find staging areas outside of the city to protect city vehicles and to make them available after storms.



Mitigation Action 5

Provide educational outreach to residents to increase awareness of vulnerability to multiple hazards. Focus on hurricane preparedness, sea level rise, flooding, and severe repetitive flood loss.

Progress: Ongoing

Report:

The Office of Emergency Preparedness and Response provides significant outreach to citizens about hazards through the Community Emergency Response Team (CERT) program, civic league meetings, and school presentations. Educational outreach is a key component to raise awareness of the hazards to citizens. The Departments of Public Works, Planning and Public Utilities continue to provide outreach and awareness to citizens on hazards by providing workshops. Each year the Department of City Planning mails citizens within the Repetitive Flood Loss areas to remind them of the importance of flood insurance and safety. Over 8,000 letters were sent to citizens this year as part of the City's participation in the CRS program.

The City of Norfolk continues to update the flooding awareness webpage, accessible from our homepage. The cross-departmental Flood Awareness Committee also provides quarterly updates to citizens as well as to the professional community on the City's progress on flood mitigation as well as providing an opportunity for dialogue for all interested stakeholders.



Mitigation Action 6

Purchase and install generators for critical facilities and infrastructure, including but not limited to pump stations, EOC, shelters, underpasses and important traffic signals.

Progress: Ongoing

Report:

The Department of Utilities has installed fixed sewage bypass pumps at multiple wastewater pump station locations. The generators and fixed sewage bypass pumps will help maintain critical storm water and wastewater pumping operations during storm events where power may be lost. The City has also received a grant for quick-connect generator that was used to upgrade the Berkley Community Center with upgrades underway. Three additional generators have been obtained and can be deployed by Facility Maintenance to the Berkley Community Center, Bayview Recreation Center, and Lake Taylor Middle School.



Mitigation Action 7

Construct an additional fueling station to complement the existing 2 stations at Fleet/Maintenance/Schools and McKann Avenue. Install 2 new 20,000 gallon tanks, increasing City's fuel storage capacity from 25,000 to 75,000 gallons.

Progress: Ongoing

Report:

In addition to the existing fueling facilities, the City of Norfolk participates with third parties to provide off-site fueling facilities. These facilities are located outside of the floodplain on major streets for general access to city vehicles during times of emergency. Analysis is being done on the need for additional fuel storage with these additional facilities available.



Mitigation Action 8

Continue to implement capital improvements that improve stormwater management and control flooding, especially for undersized and out-of-date drainage systems and patterns.

Progress: Ongoing

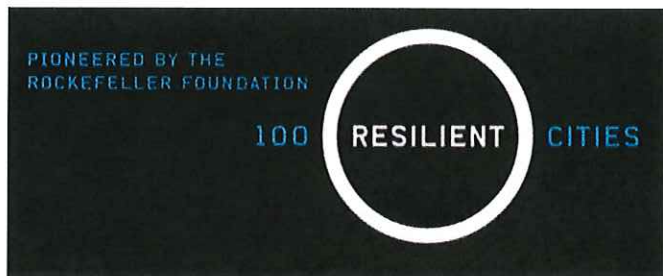
Report:

Public Works is continuously reviewing their systems and they are being improved as part of capital improvements. The following significant projects have been completed:

- Lower Peterson St. Drainage Improvements
- Fairmount Park Phase 12 and 13 Infrastructure Improvements
- Brickell Road Phase 1 Drainage Improvements
- Pleasant Avenue 8th Bay to 10th Bay (Northern half)
- Montclair Ditch Improvements
- Conoga Street and Cypress Street Drainage Improvements
- Halifax Lane Phase 1 Drainage Improvements
- Hilton Street Storm Drain Repairs and Improvements
- Texas Avenue and Humboldt Street Drainage Improvements
- Buffalo Avenue and Sheppard Avenue Drainage Improvements
- Boush Creek Avenue and Beechwood Avenue Drainage Improvements
- Broad Creek Outfall Repairs (6 Different Locations)
- Combined Coastal & Precipitation Flooding Master Plan

The City is also a part of the Rockefeller Foundation RE.invest Initiative which explores ways the private sector can be engaged to enhance flood protection in some older areas of Norfolk with a history of flooding. The city is currently reviewing a report of actions and deliverables from the Re.invest group.

The city is also recognized as part of the initial cohort of the 100 Resilient Cities. Also funded by the Rockefeller Foundation, it provides access to worldwide network and a knowledge base that will be able to identify additional strategies to help the City be more resilient to physical, social, and economic threats. As a part of this, the city has appointed Christine Morris as the Chief Resiliency Officer.



Investing in resilience. reinvesting in communities.

Mitigation Action 9

Identify and improve critical facilities and infrastructure to minimize flood and wind damage, specifically targeting schools, EOC, and emergency shelters. Mitigate flood damage for three local hospitals through floodproofing and/or elevation. Action may also include placing utility lines underground or preemptive traffic systems for emergency vehicles.

Progress: Ongoing

Report:

The City, in conjunction with Norfolk Public Schools, is currently in the design phase of multiple school replacements throughout Norfolk. These new facilities will replace older facilities that do not meet current requirements for stormwater management and, in some cases, flood zone elevation. These new structures will meet these requirements and provide safer emergency shelters in times of need.

Public Works has completed the improvements to Brambleton Avenue that provides better access to Sentara Norfolk General Hospital and Eastern Virginia Medical College during storm and flooding events.



Mitigation Action 10

Protect flood-prone structures through the following ongoing actions:

1. Gather data on individual repetitive flood losses, including improved damage assessments (past and future), insurance claims data, structural features, first floor elevations;
2. Give highest priority to protection of “severe repetitive losses” as defined by the National Flood Insurance Program (NFIP);
3. Target potential properties or cluster of properties for purchase and conversions to public open space; and,
4. Elevate, acquire, relocate or otherwise retrofit structures.

Progress: Ongoing

Report:

The Office of Emergency Preparedness and Response and the Department of Public Works currently helps property owners apply for grants to elevate structures located within the floodplain using the Hazard Mitigation Grant Program. One house elevation has been completed this year with four under construction. Eight additional projects have been funded and are under design while 33 additional applications have been submitted for funds.

Following storm and flooding events, the Planning Department provides data to the Federal Emergency Management Agency of damage. This data will be used to provide better analysis of damage properties for future city outreach and assistance.



Mitigation Action 11

Improve post-event damage assessment procedures so that damages, event frequencies, and other data are more readily available for mitigation planning.

Progress: Ongoing

Report:

After a storm or flooding event occurs, properties that have received damage are mapped using GIS as part of the damage assessment reporting. Damage assessment training is provided each spring for staff that inspects properties after events.

Public Works uses a new data tracking software of storm events (STORM) for live input of information from the public that is used to provide guidance to city staff of where problems exist during storm events. This system has also been utilized for the reporting of private property for FEMA after events. CommTech continues to review and upgrade the system to maintain efficiency.

A smartphone application is now also available that allows for citizen reporting of issues throughout the city. This includes the ability to attach photographs of the situation, ranging from pot holes to flooding, which can allow city staff to better assess the problems. An additional flooding application has been created by a private non-profit Wetlands Watch. This application has the ability for users to report flooding on streets in real time and is being tested.



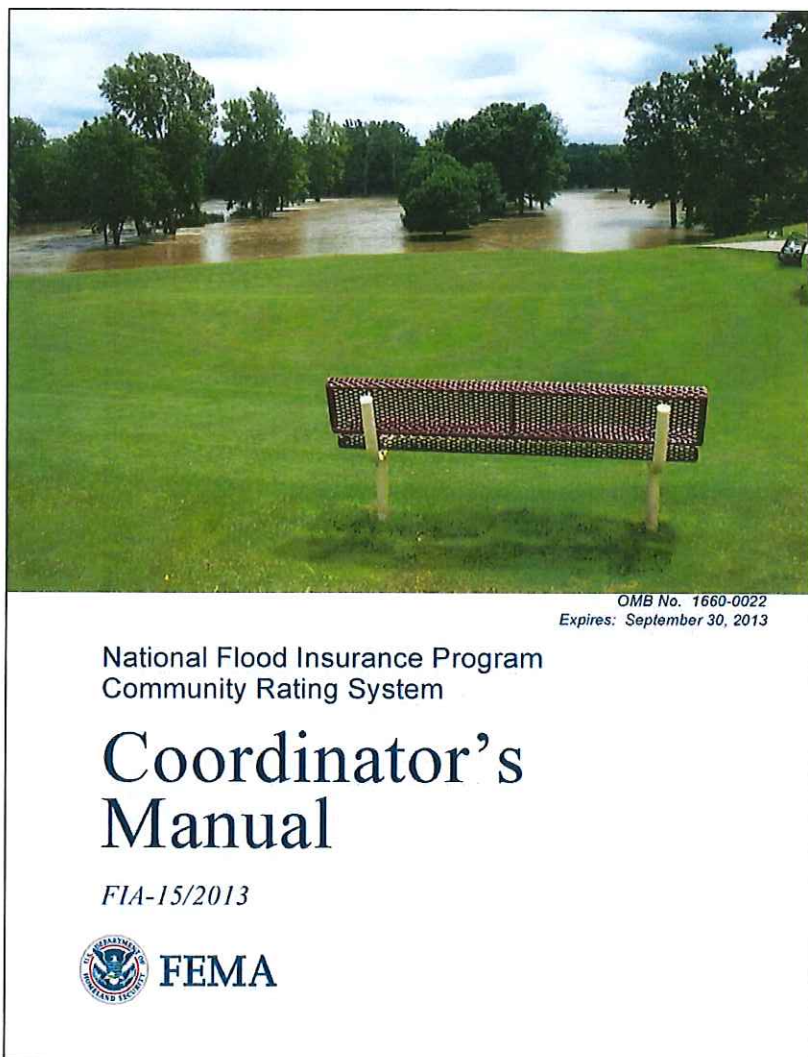
Mitigation Action 12

Implement actions to improve Community Rating System (CRS) classification to at least a Class 8 with a 10 percent discount on most flood insurance policies.

Progress: Ongoing

Report:

Revisions to the *Zoning Ordinance* were approved and implemented on January 1, 2014. These revisions allow for development to be better resilient to flood damage. These changes also will help the city to apply for an improved CRS classification that will reduce flood insurance premiums for property owners in the city. A two tier application process is expected to begin Spring 2015. An upgrade was delayed to focus on upcoming Flood Insurance Rate Map (FIRM) revisions that the city must review and adopt.



Mitigation Action 13

Verify the geographic location of each NFIP repetitive loss property. Determine if that property has been mitigated and, if so, by what means.

Progress: Ongoing

Staff has been identified to begin the tracking and monitoring of repetitive loss properties. Future outreach and assistance is anticipated to begin in 2014. Due to changes in definitions in what constitutes a repetitive loss property, staff must review the new list of properties and determine each property's status.

